



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

### SOUTH CENTRAL REGIONAL OFFICE

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L. Preston Bryant, Jr.  
Secretary of Natural Resources

David K. Paylor  
Director

Thomas L. Henderson  
Regional Director

March 4, 2008

Mr. James H. Zieche  
Cumberland County Development Company, LLC  
2490 Charles City Road  
Richmond, VA 23231

RE: Cumberland Landfill – PN 606  
Administrative Completeness Review

Dear Mr. Zieche:

A Part B permit application was received for the Cumberland Landfill (Permit Number 606) by the Department on August 24, 2007 and was revised on September 21, 2007 (updated Module III, Attachment 2). On September 6, 2007, the Department sent an acknowledgement letter and that indicated that the review of your Part B application would begin upon approval of the Part A application, which occurred on February 1, 2008.

The Part B solid waste permit application that was received by the Department contained the following documents:

- A. Design plans, entitled "Part B Permit Application Drawings for Cumberland Landfill"
- B. Narrative document, entitled "Part B Permit Application for Cumberland County Development Company LLC", which contains the following sections:

Module II – Operations Manual with Appendices

Module III – Landfill Design Report with Attachments (Attachment 2 revised September 21, 2007)

Module X – Groundwater Monitoring Plan with Appendix  
Module XI – Groundwater Sampling and Analysis Plan with Appendix  
Module XII/XIII – Closure / Post Closure Plan with Attachments

This is to advise you that your Part B application for a solid waste management facility is considered administratively incomplete. Please address the following deficiencies:

**Part A Approval Letter**

1. Per 9 VAC 20-80-520 B.2, please provide a copy of the Part A approval letter including all attachments and provide a description of the measures that will be taken to meet each of the conditions contained within the Part A approval letter, including all its attachments.

**Operations Manual**

1. Per 9 VAC 20-80-520 C.2c-d, please include a table that estimates the timeframe to begin filling each cell. This table should also summarize the acreage and volume of each cell.
2. Per 9 VAC 20-80-520 C.2.f, please provide inspection checklists for items to be inspected on a weekly, monthly, and quarterly basis.
3. Please revise Section 7 of the Operations Manual to state the following (bullet point items can be expanded as necessary):

“The permittee shall maintain records of design and operating parameters as necessary to demonstrate compliance with this permit and the Virginia Solid Waste Management Regulations. The content and format of such records shall be arranged with the South Central Regional Office. These records shall include, but are not limited to:

- Copies of all records and approvals required by the Part A application approval letter dated February 1, 2008 including any subsequent amendments.
- Records, in tons, of the loads of waste brought to the facility for disposal sufficient to document the average daily intake rate.
- Records, in tons, of the loads of waste brought to the facility for disposal sufficient to document that the maximum daily intake rate has not been exceeded.
- Monitoring records sufficient to document that the seasonal high groundwater elevations within the limits of the proposed landfill area do not rise to within 5' of base grades as indicated in the Part A application.

- Groundwater monitoring records including copies of all reports and notifications sufficient to document compliance with the facility's approved Groundwater Monitoring Plan.
- Gas monitoring and control records including copies of all reports and notifications sufficient to document compliance with the facility's approved Landfill Gas Management Plan.
- Records sufficient to document compliance with all corrective action plans.
- Records sufficient to document that leachate collection, handling, recirculation, and removal are conducted in a manner consistent with the facility's approved Leachate Management Plan including information documenting that no more than one foot head of leachate is accumulating over the liner.
- Copies off all inspection records including weekly, monthly, and quarterly checklists.
- Copies of all personnel training records.
- A copy of the facility's disclosure statement.
- Copies of financial assurance cost estimates sufficient to document compliance with the facility permit and 9 VAC 20-70.
- Records sufficient to document compliance with the facility's approved Safety Plan.
- Records sufficient to document compliance with the facility's approved Emergency / Contingency Plan.
- Records sufficient to document compliance with the facility's approved Unauthorized Waste Plan.
- Copies of all construction quality assurance program (CQA) related information for new cells and for closed cells.

Unless otherwise specified by the permit or the Solid Waste Management Regulations, the records shall be maintained for the life of the facility and shall be available for inspection at all times by the DEQ."

4. Per 9 VAC 20-80-520 C.2.k (2), please provide a description of arrangements made with the local police and fire department which allow for immediate entry into the facility by their authorized representatives should the need arise, such as in the case of personnel responding to an emergency situation.
5. Per 9 VAC 20-80-520 C.2.k (2)A, please provide a list of names, addresses and phone numbers (office and home) of all persons qualified to act as



emergency coordinator for the facility. This list shall be kept up to date. Where more than one person is listed, one shall be named as primary emergency coordinator and the others shall be listed in the order in which they will assume responsibility as alternates.

6. Section 5.2.1 of the Operations Manual does not address the handling of white goods containing Freon. Please indicate how white goods containing Freon will be handled and how the facility will comply with 9 VAC 20-80-690.
7. In Section 5.2.1 of the Operations Manual, please note that 9 VAC 20-80-670 limits the number of tires allowed to be stored at a facility to 1000 unless otherwise specified in the permit.
8. In Section 5.2.1 of the Operations Manual, please also note requirements in 9 VAC 20-80-650, 9 VAC 20-80-680, and 9 VAC 20-80-700.
9. In Section 5.58 of the Operations Manual, revise the second sentence to state that "After receiving written approval from DEQ, the facility may employ the use of an alternate daily cover, and apply soil cover on at least a weekly basis."

9 VAC 20-80-250 C.2.c requires the facility to demonstrate that the alternate material and thickness of the ADC control disease vectors, fires, odors, blowing litter, and scavenging without presenting a threat to human health and the environment. The required demonstration period is 180 days during which the above factors shall be evaluated.

Once the facility is constructed and is ready to begin use of the ADC, a written request may be submitted to the DEQ asking for approval to begin the 180-day demonstration. Once written approval is received from the DEQ, the 180-demonstration may begin. The ADC will then be approved or disapproved, in writing, by the DEQ after the demonstration period, based on the technical evaluation of the ADC with regard to the above noted parameters and two DEQ site inspections.

## **Design Report**

1. 9 VAC 20-80-520 A.1.f requires a series of phasing plan sheets showing the progression of site development through time. The regulation further states that, at a minimum, a separate plan shall be provided for initial site preparations and for each subsequent major phase or new area where substantial site preparation must be performed. Additionally, 9 VAC 20-80-250 B.19.d states that waste shall not be received in a landfill unit until the owner or operator has submitted to the department by certified mail or hand delivery a certification signed by the CQA officer that the approved CQA plan

has been successfully carried out and that the unit meets the requirements of this section.

Therefore, please provide phasing plans in a manner that will be reflective of how the facility will be requesting certificates to operate (CTO's). For instance, if the facility will be constructed sequentially by Cell (Cell 1-14), a phasing plan should be submitted for each Cell to provide a basis for granting CTO's.

2. If applicable, please provide a statement indicating that the facility is not located within the 100 year flood plain on Drawing C1.
3. 9 VAC 20-80-520 A.1.i requires detailed drawings and typical sections for fencing, leachate and gas control systems and monitoring devices, buildings, signs, and other construction details.

Please provide a detail of typical fencing that will be used as a barrier in complying with 9 VAC 20-80-250 B.1, a leachate tank elevation detail, leachate loadout details, gas control system details for blowers, condensate traps, condensate knock-out tanks, and flares or other controls, signs used to support the Control Program for Unauthorized Waste, and any other details that may be needed to meet the requirements of 9 VAC 20-80-520 A.1.i.

4. 9 VAC 20-80-520 A.1.j (16) requires plan sheets for special waste handling areas which were not provided. Please show the special waste handling areas in the phasing plan sheets.
5. Per 9 VAC 20-80-250 B.16, please discuss the permanent benchmarks in the Design Report and show them in the design drawings. Permanent concrete monuments that are separate from other facility features must be provided. Please note the definition of "benchmark" in 9 VAC 20-80-10.
6. Per 9 VAC 20-80-250 B.6.a, please describe the system that will be used to prevent run-on onto the active portions of the landfill in the Design Report and the Operations Manual.
7. In order to support the design calculations, please provide the results from sufficient index testing to classify the site materials. Lab test data should be provided to evaluate the engineering properties of the foundation materials, particularly for strength, hydraulic conductivity, compressibility, and other important design parameters.
8. Per 9 VAC 20-80-520 A.1.h, please show soil types and boring locations as applicable on the site cross section drawings.

9. 9 VAC 20-80-100, 9 VAC 20-80-550 B, and § 10.1-1456 of the Waste Management Act require that DEQ be allowed to enter a permitted solid waste management facility for inspection, review of records, and review of reports. Since the proposed facility entrance is not directly on a public roadway and since CCDC does not have full control over the access road according to Drawing C19 of the Design Plans, how does CCDC propose to guarantee DEQ access for inspections at any reasonable time?

### **Technical Specifications**

1. Per 9 VAC 20-80-520 B.3.a, please provide detailed specifications for the leachate storage tank, the fill station pumps, the fill station, the leachate sump pumps, perforated leachate collection pipe, gas probes, gas vents, gas control system blower(s), gas control system flare(s) / controls, gas control system condensate handling equipment, and fencing.
2. Per 9 VAC 20-80-520 B.3.a, please provide detailed specifications for the compacted clay to be used in the alternate liner and in the composite cap.
3. If a soil amendment such as bentonite may be used to obtain the required permeability, please provide a specification for amended soil.

### **Closure and Post-Closure Care Plan**

1. In Section 1.2 of the Closure Plan, please provide acreages of the closure areas in Table 1.1.
2. Drawing D4 of the Design Report does not indicate that the minimum Subtitle D composite cap is being proposed. The soil component of the composite cap must consist of at least 18" of compacted clay with a maximum permeability of  $1 \times 10^{-5}$  cm/s.
3. Please provide a universal soil loss calculation to help document that the proposed cap design minimizes erosion and therefore the need for maintenance.
4. Please provide a post-closure care checklist per the submission instructions and 9 VAC 20-80-520 C.2.f-g.
5. The closure cost estimate is not reflective of a composite cap. Please include a cost component for at least 18" of clay with a maximum hydraulic conductivity of  $1 \times 10^{-5}$  cm/s.
6. Per 9 VAC 20-70-111 A.1 and 9 VAC 20-80-520 D, the cost estimate for facility closure shall equal the cost of final closure at the point in the facility's active life when the extent and manner of its operation would make closure



the most expensive, as indicated by its closure plan. Based on the Design Plans and the Closure Plan, the maximum area that will be open or inactive will be greater than 16.9 acres. Please show through calculations the maximum open or inactive area and provide a closure cost estimate based upon this area.

Additionally, please provide closure cost estimates over the life of the facility based upon the anticipated CTO issuance and closure certification schedule.

7. The post-closure care cost estimate for leachate management appears to be too low. Please revise the estimate to be reflective of the maximum post-closure leachate production of the 234.5 acre site over time.
8. Per 9 VAC 20-70-81 B and 9 VAC 20-80-520 D, the selected financial responsibility mechanism or mechanisms shall be filed with the Department of Environmental Quality as part of the permit application procedures and prior to the issuance of an operating permit. In the Part B application, please indicate the selected financial responsibility mechanism. Details and approval of the financial responsibility mechanism should be coordinated with the DEQ Office of Financial Assurance.
9. In Section 1.7 of the Closure Plan, please include requirements from 9 VAC 20-80-640 D.7 regarding asbestos disposal.

You are hereby requested to make the necessary corrections and provide additional information within 45 days in order to eliminate the deficiencies outlined above. Processing of your permit application may not continue until these corrections and additions are made and submitted to the Department.

Any deficiencies involving the Groundwater Monitoring Plan will be handled separately. If we may be of further assistance, please contact me at (434) 582-6206 or [mdbiesterveld@deq.virginia.gov](mailto:mdbiesterveld@deq.virginia.gov).

Sincerely,



Matthew D. Biesterveld, P.E.

Senior Environmental Engineer

cc: Mr. Stephen Batiste  
Brown and Caldwell  
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Nashville, TN 37228